

Installation of moisture protection layer - a so called vapour barrier in external walls

Pre-conditions

Preparation

Self-inspection

Execution



This **work instruction** is designed for use in detailed planning and preparation of work on construction projects. With thorough planning high levels of personal safety and optimal work apportionment can be achieved at the same time as the work can be organized efficiently and cost effectively.

Explanation

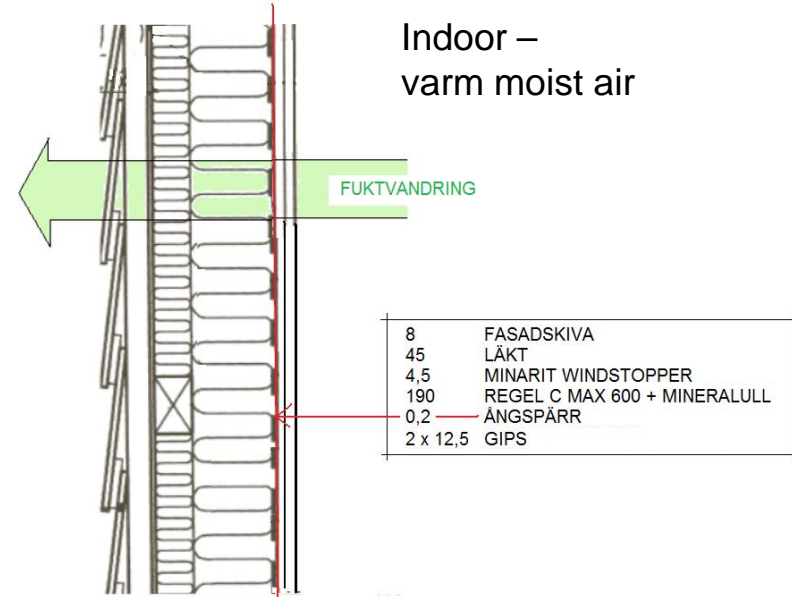
Vapour barrier

Moisture in a building structure can cause problems with odour and mould. The amount of moisture in the air varies according to the weather conditions. Indoor air is generally more moist than outdoor air. Therefore we install a **vapour barrier** to prevent the moist indoor air from escaping into the external wall.

A vapour barrier in the form of a impervious film should be placed on the **inside** of the external walls and **under** floors and ceilings.

The vapour barrier is very important for building moisture protection. It is therefore important to choose a product that is resistant to aging and which will function throughout the lifetime of the building. The chain is no stronger than its weakest link - it is therefore important that the vapour barrier is installed properly so that the seams and penetrations are sealed.

Remember that at all penetrations of the vapour barrier = seal with foil!



Safety — Risk assessment

Work activity & Problem	P	C	Risk= P*C	Action
Overloading/straining	30	5	150	Proper posture
Cluttered workplace = Twist/fall injuries	10	15	150	Regular tidying Work from a trestle - not a ladder
Cutting foil, cuts	3	15	45	
Dustiness	3	15	45	Respirator

Probability = P
Consequence = C
Risk = P * C

Assessment of probability
 P = 0,1 Very unlikely (<1 times/10 years)
 P = 1 Unlikely (1 times/10 years)
 P = 3 Low probability (1 times/3 years)
 P = 10 Relative probability (1 times/year)
 P = 30 Probable (1 times/month)

Assessment of consequences
 C=0,5 Trifle
 C=1 Tiny (1 - 2 days sick leave)
 C=5 Small (3 - 7 days sick leave)
 C=15 Tactile (8 - 29 - " -)
 C=70 Severe (30-299 - " -)
 C=500 Very severe (>300 - " -)

Text and images from the Working Environment Authority's brochure Safer Construction Work

Personal Protective Equipment § 71

Safety helmet and safety shoes should be used unless it is clearly unnecessary. Other personal protective equipment such as eye protection, hearing protection and gloves should be worn when necessary.

First Aid

On the construction project the issue of First Aid had been resolved in the manner shown in the photo. Moved around with help of a sack barrow.



Equipment and Materials

Materials:

- Foil vapour barrier according to the technical specification
- Fastening and sealing materials
- For example, double-sided tape

Equipment:

- Knife
- Tape Holder
- Staple Gun - note limitations according to AMA regarding staples
- Stepladder

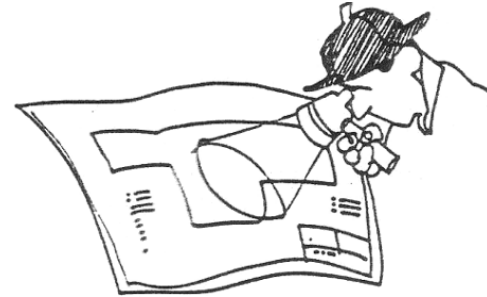
Self-inspection ¹⁽²⁾ Template & instructions

No	Check	Method or equipment	Frequency	Result	Date Signature	Deviation/Remedy Approval/Non-A
1	Electrical installations and other penetrations of the vapour barrier	Ocular	Before plaster-board			
2	Stapling	Ocular	Prior plaster-board			
3	Fitting around doors and windows	Ocular	Before the plasterboard			
4						
5						
6						
7						
8						
9						
10						
11						

Key points

Quality criteria for the project and the product

- Study Drawings, Specifications and Inspection planning
- Think through the alternative **methods of production** and handling of materials, tools etc. that can meet the requirements



Pay particular attention to

- Materials for grouting and jointing of moisture protection shall be in accordance with the Specification and the supplier's instructions
- Seal the penetrations and connections - secure vapour barrier
- Ensure that there is an overlap between different building elements - wall parts and floor / roof



Securing with staples
and
with double-sided tape



Foil rolled out to the appropriate amount, cut, folded out and fastened in upper scantling.

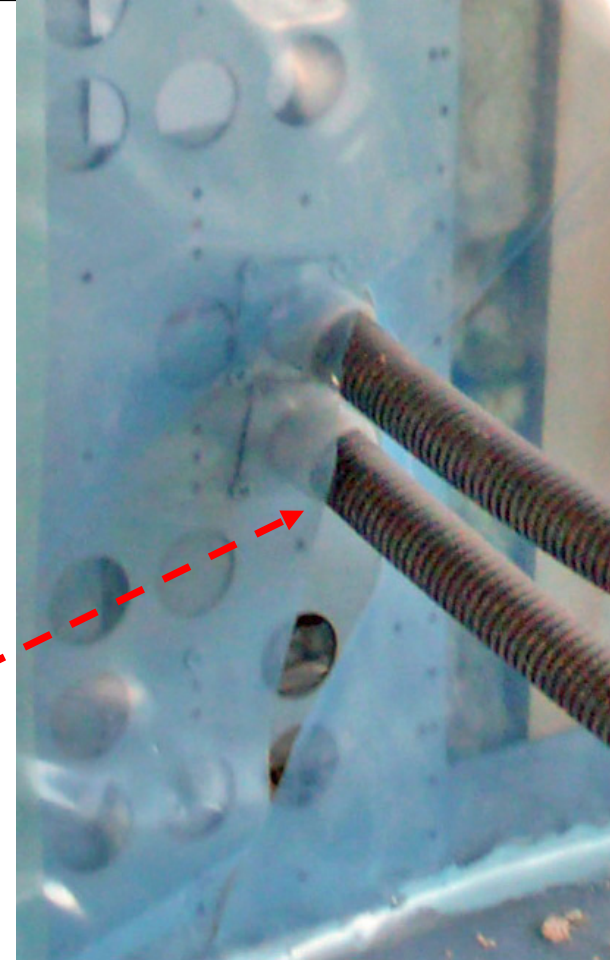
The foil is rolled out and fastened from the middle to the sides so that it becomes smooth.

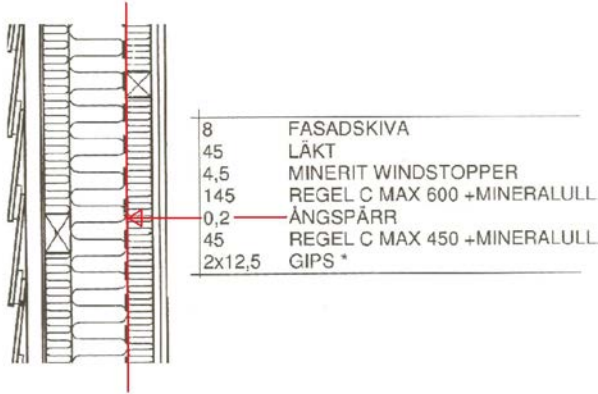
The foil is fitted at door and window openings and secured around before trimming.



The electrician cuts cleanly around the electrical boxes and has the possibility of sealing with a sealing ring that is secured around cable where it enters the box, around the foil.

It should not look like this...





A secure external wall -

In this external wall there are 2 layers of insulation. The vapour barrier is placed between them and the installations on the inside of the internal vapour barrier in the 45 mm thick insulation

